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TITLE: DRIVING CONTROLLER FOR MOBILE
VEHICLE

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INVENTOR-INFORMATION:

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ABSTRACT:

PURPOSE: To ensure the smooth driving control of a mobile vehicle and also to attain the high stability to the external change of an environment by detecting the present position of its own vehicle and correcting the gain of the controlled variable based on the result of comparison carried out between the detected real position and the estimated position of the vehicle.

CONSTITUTION: A target position l to be set after a fixed time is calculated via a front route recognizing part 20 from a picture obtained via a camera 1. Meanwhile an estimated goal position d^* is calculated from the speed/acceleration output of a sensor 24. A target point deviation calculating part 21 calculates $\epsilon = l - d^*$ and then calculates a basic steering angle via a manipulated variable calculation part 22. At the same time, the position (d) of its own vehicle is calculated from a picture of a camera 2. Then an evaluating part 27 calculates a corrected variable $\Delta\theta$ of the steering angle based on both positions (d) and d^* and controls an actuator. Thus the steering control is quickly converged and stabilized

and the smooth
control of the vehicle is secured despite the disturbances
like the winding of
a path, the variance of the road surface frictional coefficient,
etc.

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